IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants:	Soon-Jin KIM	Group Art Unit:	2684
Serial No.:	09/473,360	Examiner:	Nguyen, Tu X.
Filed:	December 28, 1999	Docket:	678-427

For: **METHOD AND SYSTEM FOR TRANSMITTING CHARACTER MESSAGES IN MOBILE COMMUNICATION TERMINAL DURING CONVERSATION BY TELEPHONE**

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

REAL PARTY IN INTEREST

The real party in interest is Samsung Electronics Co. Ltd., the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (a)

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Dated: February 3, 2006

Paul J. Farrell

STATUS OF CLAIMS

Original Claims 1-5 were filed with the original specification on December 28, 1999, with Claims 1 and 5 being in independent form. Claims 1 and 5 were first amended in an amendment dated November 22, 2002 and were subsequently amended a second time in the Examiner's Amendment dated July 17, 2003, and were amended a third time in an Amendment dated May 4, 2004. Thus, Claims 1-5 are pending in the Appeal. For the purposes of this appeal, Claims 2-4 stand or fall together with Claim 1, and Claim 5 does not stand or fall with any of the other claims. Claims 1 and 5 are method claims.

STATUS OF AMENDMENTS

The Appendix to this Appeal Brief includes independent Claims 1 and 5, as amended by the Amendment dated May 4, 2004, and dependent Claims 2-4, as originally filed. There have been no amendments filed subsequent to the final rejection set forth in the Office Action mailed June 3, 2005.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a method for transmitting and receiving a character message in mobile communication terminals during a telephone conversation, in which the character message is transmitted while maintaining a conversation state (Specification, page 1, lines 3-6; page 7, lines 4-9; page 9, lines 3-9; page 12, lines 5-8; and FIG. 3). The character message is processed and sent using a general character

message format such as a Short Messaging Service (SMS) format, and is transmitted, without converting the character data, via an established speech path or a channel for conversation by telephone (page 3, lines 2-4, 5-18; page 4, lines 18-20; and page 7, lines 4-9). For example, the paragraph beginning on line 10 of page 4, discloses a short (character) message is saved in digital form and transmitted to a different mobile exchange office, etc. for further transmission on to a destination mobile terminal.

As defined by Claim 1, the present invention is drawn to a method for transmitting a character message in a mobile communication terminal while maintaining a conversation by telephone. The method further teaches setting the mobile communication terminal to a character message transmitting/receiving mode while in a state in which a speech path has been established between the mobile communication terminal and a mobile communication terminal of a party other than the user. The method also teaches inputting a character message while in the character message-transmitting/receiving mode, processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode.

As defined by Claim 5, the present invention is also drawn to a method for receiving a character message in a mobile communication terminal while maintaining a conversation by telephone. The method further teaches establishing a speech path between the mobile communication terminal and a mobile communication terminal of another party, receiving a character message including non-converted character data from the mobile communication terminal of the other party via the speech path, and processing

and displaying the received character message.

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,385,585 B1 to Jonsson et al. (hereinafter "Jonsson"); and Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Jonsson in view of U.S. Patent No. 5,687,216 to Svensson (hereinafter Svensson).

ARGUMENT

I. JONSSON FAILS TO ANTICIPATE THE INVENTION AS CLAIMED IN CLAIM 1.

Independent Claim 1 was said to be anticipated by Jonsson. See, paragraph 3, at page 3, of the Office Action dated June 3, 2005. Jonsson relates to an apparatus for transmitting a digital input symbol to a receiver by determining one or more formant frequencies that correspond to the digital input symbol (Abstract; column 3, Lines 1-11). More specifically, Jonsson relates to an apparatus for converting a digital symbol into a formant frequency and transmitting the formant frequency via a voice channel (Abstract; column 3, lines 4-8 and 50-54).

Jonsson also teaches a "common 'language'" for interfacing user service nodes that utilize speech recognition techniques as a control interface (column 2, line 66; and column 9, lines 35-40). Thus, it is seen that the formant frequencies form the "common 'language'" for controlling the service nodes (e.g., see column 3, lines 1-12 and 1-4; and

column 9, lines 35-40). As was explained on page 3 of the Response dated May 13, 2003, the Merriam-Webster dictionary defines a formant as: "a characteristic component of the quality of a speech sound; specifically: any of several resonance bands held to determine the phonetic quality of a vowel." In this regard, Jonsson teaches communicating (digital) input symbols over a speech channel, and illustrates the "inventive" input symbol-to-formant frequency encoder 100 in FIG. 1 (column 3, lines 6-12; and column 5, lines 29-32). Accordingly, Jonsson teaches converting input symbols to corresponding formant frequencies so that they can be transmitted over a voice channel, and further teaches that "[t]he signal is particularly suited for this purpose because it comprises formant frequencies, which the voice channel is particularly adapted for" (id., emphasis added). Thus, Jonsson teaches converting input data to a formant frequency and transmitting the converted data over a voice channel.

In contrast to the Examiner's assertion[1, 2], Jonsson teaches the same voice channel is used for data and speech (column 10, lines 57-58). Jonsson further teaches switching from a voice mode to a data mode to transmit data, because the same voice channel is used for data and speech, and that an initiating (i.e., transmitting) party disconnects all voice equipment to transmit a predefined sequence of symbols in the form of formant frequencies (e.g., see "X") (column 3, lines 49-55; column 10, line 56-column 11, line 16; column 11, lines 30-37; and FIGs. 6 and 7).

Jonsson further teaches because the formant signals have frequency characteristics which are similar to human speech, formant signals are easily converted

[1] e.g., see the Office Action dated June 3, 2005, page 2, paragraph 1.

[2] It is also noted that the Examiner mischaracterized and misquoted the Applicant's previously submitted arguments, e.g., see the Response dated April 14, 2005, page 3, Middle Paragraph, and Applicant's rebuttal in the Response dated September 2, 2005, page 2.

by a standard voice coder (CODEC), which is commonly found in mobile transceivers, for transmission to a receiver (Abstract; column 3, lines 10-13; and column 5, lines 5-11).

It is the position of the Examiner[3] that Jonsson discloses all the limitations of Claim 1.

Claim 1 recites inputting a character message in the character message-transmitting/receiving mode, processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode. It is also noted that the above-stated limitations are performed while maintaining a conversation by telephone as recited in the preamble of Claim 1.

However, Jonsson fails to teach or suggest, while maintaining a conversation by telephone, inputting a character message in the character message-transmitting/receiving mode, processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode, as recited in Claim 1.

As defined by the specification of the present application, calling and called parties may resort to transmitting and receiving character messages (e.g., using a Short Message Service (SMS)) during a conversation (Specification, page 1, paragraph beginning on line 8; and Specification, page 3, paragraphs beginning on lines 2 and 5). In other words, a character message is transmitted during an ongoing telephone conversation. This telephone conversation is a continuous and ongoing telephone

[3] Office Action dated June 3, 2005.

conversation. In other words, the calling and called parties can communicate at all times with each other. The step of transmitting the written character message including the non-converted character data during a voice communication, as recited in Claim 1, has been equated by the Examiner with the short message transmission method as taught by Jonsson in column 10, lines 39-44 (Office Action, dated June 3, 2005, pp. 3-4).

The cited text of column 10, lines 39-44, which the Examiner states anticipates the step of inputting a character message while in the character message-transmitting/receiving mode, processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode, while maintaining a conversation by telephone of Claim 1, specifically states in full:

> In still another exemplary application, the user may send short messages or commands to the server both during voice conversation and when no communication is going on. The server may be the receiver of the information or it may transfer it to the final destination on any bearer channel.[4]

It is the Examiner's position that the cited text discloses processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode, while maintaining a conversation by telephone, as recited by Claim 1 (Office Action dated June 3, 2005, pp 3-4). However, the cited passage of Jonsson merely teaches sending a short message, which has been converted to a formant frequency, using a voice channel which

[4] In the rejection of the Claims, the Examiner is apparently not relying upon the term "when no communication is going on" (Office Action dated June 3, 2005, page 3, first full paragraph).

is consistent with the teachings of Jonsson. Furthermore, according to Jonsson, when transmitting the short message, an ongoing voice conversation is not maintained, rather only a speech channel is maintained. This is consistent with Jonsson's teaching of changing to a data transmission mode, when transmitting data (column 3, lines 49-50), and thereafter returning to a speech transmission mode for speech communication (column 3, lines 60-65). In this regard, Jonsson teaches a mechanism for enabling a desired mode (e.g., voice mode or data mode), because the same channel (i.e., the voice channel) is used for both data and speech switching (column 10, lines 56-64), and disconnecting all voice equipment such as a microphone or loudspeaker (thus, disabling voice communication abilities), when in the data mode (column 10, line 64-column 11, line 3; and FIGs. 6 and 7). Accordingly, as all voice equipment (e.g., the microphone and loudspeaker) is disabled when transmitting data (e.g., short (text) messages, as the Examiner alleges in the Office Action dated July 27, 2004, page 2), an ongoing voice communication (e.g., telephone conversation, as recited in Claim 1) between a calling and a called party is also disabled. This is further evidenced with reference to FIG. 6 of Jonsson, which illustrates a mode change in a client terminal in which when one or more keys 601 are activated (i.e., for inputting symbols), microphone 605 is disconnected by the control unit 603 (column 11, lines 4-16; and FIG. 6) and thereafter, a sequence of symbols (data designated as "X") in the form of formant frequencies is passed to a voice coder (CODEC) 609 which processes them in the usual manner and then passes them to a transmitter 611 (Id.) In other words, as taught by Jonsson, data is transmitted by converting the data to a formant frequency and transmitting the formant frequency, and a voice path (e.g., a path for voice communication to/from the user) is disconnected when

transmitting the data. Furthermore, Jonsson only teaches, at most, a single CODEC (e.g., see column 9, lines 13-15; and FIGs. 1A, 1B, 1C, and 5A). Therefore, in the data (transmission) mode, voice communication (to/from the CODEC) is disabled.

Furthermore, in accord with Jonsson's "common 'language'" for interfacing user service nodes (column 2, line 66), Jonsson teaches at the receiving side, the received formant frequency (or combination of formant frequencies) is then converted back to the corresponding digital information by means of a reverse mapping process (column 5, lines 19-23; and FIGs. 2 and 7). In other words, data is transmitted by converting the data to formant frequencies and thereafter receiving the converted data and converting it back to the corresponding original information.

Accordingly, from reading Jonsson, it is seen that data is transmitted using a data mode and that in the data mode, voice communication (e.g., a telephone conversation, as recited in Claim 1) is disabled. Furthermore, Jonsson teaches the data is converted to a formant frequency for transmission in the data mode (thus conforming to Jonsson's "common 'language'"). Moreover, Jonsson teaches in the voice mode (in which voice communication has been disabled as stated above) the converted data is transmitted using a voice channel.

II. THE COMBINATION OF JONSSON AND SVENSSON FAILS TO RENDER OBVIOUS THE INVENTION AS CLAIMED IN CLAIM 5.

Independent Claim 5 was said to be rendered obvious by the combination of Jonsson and Svensson (See, Paragraph 6, at page. 6, of the Office Action dated June 3, 2005).

As stated above with respect to Claim 1, Jonsson relates to an apparatus for transmitting a digital input symbol to a receiver by determining one or more formant frequencies that correspond to the digital input symbol (Abstract; column 3, lines 1-11). More specifically, Jonsson relates to an apparatus for converting a digital symbol into a formant frequency and transmitting the formant frequency via a voice channel in a data mode (Abstract; column 3, lines 4-8 and 50-54). As discussed above, Jonsson teaches disconnecting any voice equipment (e.g., the microphone and loudspeaker) when transmitting or receiving data (column 11, lines 34-38). As voice equipment (e.g., a microphone is necessary for voice communication (i.e., the process of "maintaining a conversation by telephone" as recited in Claim 5), and as Jonsson teaches transmitting voice in a voice mode and data in a data mode, it is seen that a voice communication cannot be maintained when data is transmitted according to Jonsson's teachings.

Svensson discloses a mobile communication terminal for receiving messages and saving them. However, Svensson is silent on transmitting or receiving unconverted data on a voice channel.

It is the position of the Examiner[5] that the combination of Jonsson and Svensson renders obvious all the limitations of Claim 5.

Claim 5 recites a method for receiving a character message in a mobile communication terminal while maintaining a conversation by telephone, the method including establishing a speech path between the mobile communication terminal and a mobile communication terminal of another party and receiving a character message including non-converted character data from the mobile communication terminal of the other party via the speech path.

[5] Office Action dated June 3, 2005.

The Examiner states that Jonsson discloses each and every limitation of Claim 5 except for "receiving a character message from the mobile communication terminal of the other party, [and] the mobile communication terminal displaying the received character message," which the Examiner states is disclosed by Svensson (Office Action dated June 3, 2006, pages 4-5).

As stated above with respect to the rejection of Claim 1, Jonsson, teaches transmitting data using a data mode and that in the data mode, voice communication (e.g., a telephone conversation or the process of "maintaining a conversation by telephone," as recited in Claim 1) is disabled. Furthermore, Jonsson teaches the data is converted to a formant frequency for transmission in the data mode (thus conforming to Jonsson's "common 'language'"). Moreover, Jonsson teaches in the voice mode (in which voice communication has been disabled as stated above) the converted data is transmitted using a voice channel.

However, Jonsson does not teach or suggest while maintaining a conversation by telephone, establishing a speech path between the mobile communication terminal and a mobile communication terminal of another party and receiving a character message including non-converted character data from the mobile communication terminal of the other party via the speech path, as recited in Claim 5. As Svensson does not cure this deficiency, the combination of Jonsson and Svensson fail to teach or suggest each and every limitation of Claim 5.

For at least the above-discussed reasons, the combination of Jonsson and Svensson fails to teach or fairly suggest the claimed invention. Thus, the rejection of the claimed invention based on Jonsson and Svensson should be withdrawn.

Based on at least the foregoing, as the Examiner has failed to make out a prima facie case for an obviousness rejection, the rejection of Claim 5 must be reversed.

CONCLUSION

As Jonsson does not teach or suggest each and every element of Claim 1, Jonsson cannot anticipate Claim 1. Accordingly, the rejection of Claim 1 must be reversed.

As the Examiner has failed to make out a prima facie case for an obviousness rejection, the rejection of Claim 5 must be reversed. It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03. The Examiner has failed to show that all of the recitations of Claim 5 are taught or suggested by the combination of Jonsson and Svensson. Accordingly, the Examiner has failed to make out a prima facie case for an obviousness rejection.

Independent Claim 1 is not anticipated by Jonsson, nor is Claim 5 rendered unpatentable by the combination of Jonsson and Svensson. Thus, independent Claims 1 and 5 are allowable.

Accordingly, as Claim 1 is allowable, dependent Claims 2-4 are allowable

because of their dependence upon independent Claim 1.

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CLAIMS APPENDIX

1. (Previously Presented) A method for transmitting a character message in a mobile communication terminal while maintaining a conversation by telephone, comprising the steps of:

setting the mobile communication terminal to a character message-transmitting/receiving mode while in a state in which a speech path has been established between the mobile communication terminal and a mobile communication terminal of a party other than the user; and

inputting a character message while in the character message-transmitting/receiving mode, processing the written character message and transmitting the written character message including non-converted character data to the mobile communication terminal of the other party via the established speech path in the character message-transmitting/receiving mode.

2. (Original) The method in accordance with claim 1, further comprising the step of:

returning the mobile communication terminal of the user to a phone mode after the transmission of the character message to the mobile communication terminal of the other party.

3. (Original) The method in accordance with claim 1, wherein the character message input during the character message-transmitting/receiving mode is selected among character messages previously written and stored in a registered state.

4. (Original) The method in accordance with claim 1, including the additional step of receiving a character message from the mobile communication terminal of the other party via the established speech path while the mobile communication terminal is in the character message transmitting/receiving mode, the mobile communication terminal displaying the received character message.

5. (Previously Presented) A method for receiving a character message in a mobile communication terminal while maintaining a conversation by telephone, comprising the steps of:

establishing a speech path between the mobile communication terminal and a mobile communication terminal of another party;

receiving a character message including non-converted character data from the mobile communication terminal of the other party via the speech path; and

processing and displaying the received character message.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 C.F.R. §1.130, §1.131, §1.132 or entered by the Examiner and relied upon by the Appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by the court or a Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. §41.37.